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ABSTRACT

Active research can be one area of enrichment in which counselors may gain personal growth, self-discipline, and personal development. The developer of the research project also gains in knowledge and practice in the specific areas of information retrieval systems. The counselor becomes aware of the methodology used in the preparation of a proposal. Once funding has been obtained, the counselor becomes familiar with the preparation of written reports which verify the expenditure of funds. Having a successful researcher on the staff of the institution enhances its image. This positive image may be beneficial not only in countering the critics, but in assisting the school board in passing requests for badly needed millage. Research can have impact on the curriculum. The effect of pride in the research can extend to the community. Successful counselors/researchers add to the credibility of the professional counselor organizations. Sponsoring agencies, the school's curriculum council, local board of education, or parent/student/teacher group may fund the research. Once the proposal has been accepted and the actual study begins, researchers must consider informing the school administration, obtaining parent permission and cooperation of fellow staff members, and printing the instrument. After the data has been collected and analyzed, and the literature has been searched and reviewed, the writing of the final report takes place. (The document presents the proposal and final report of a study undertaken to examine the effects of a career education program for high ability students, specifically differences between the sexes.) (ABL)

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COUNSELOR ENRICHMENT: A PROPOSAL FOR AND A FINAL REPORT OF A FUNDED RESEARCH PROJECT

Linda L. Deneen

A project submitted in partial fulfillment
of the requirements for the degree of
Master of Arts

Department of Counseling, Educational
Administration and Community Leadership

Central Michigan University
Mount Pleasant, Michigan
December 1983

U.S. DEPARTMENT OF EDUCATION
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ACKNOWLEDGEMENT

The implementation and completion of this project depends upon the assistance, cooperation and support of many persons. The author wishes to extend thanks to the students and staff at Littlefield and Harbor Springs Schools and to those who experienced the "College for Kids" program at North Central Michigan College for their enthusiastic participation in this study. In addition, the Michigan Association for Career Education for providing the financial and professional support to initiate and complete this study. Above all, the author is deeply appreciative of all the encouragement and assistance provided by those special persons who shared this experience.

Linda L. Deneen

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CHAPTER I

INTRODUCTION

From time to time, counselors in the field find themselves in a position to initiate and participate in some sort of personal, professional growth and development. This enrichment may take many forms such as workshops, counselor associations, seminars, conferences, course work through a university, lectures or travel. One further area would be in the form of active research involving some aspect of counseling. Tolbert (1982, p. 313) offers "suggestions for professional development include active participation in professional organizations, research and writing." Section A: 1. of the "Ethical Standards" of the American Personnel and Guidance Association states the "professional growth is continuous throughout the member's career." Counselors need to professionally enrich themselves and continue to develop and grow within their professional context. The following report is one example of the many types of professional growth in which counselors may become involved in their careers.

How and why do counselors engage in such research activities? One reason is for the personal growth and self-development of the individual researcher. New insights and appreciations are gained as a result of the undertaking. Self-discipline is emphasized during the process, yet a keen sense of accomplishment and pride emerge with the completion of the study. This continues as the counselor's work begins to disseminate and becomes accepted by others in the profession. Validation increases in this process and self-esteem and self-concept become stronger. The feelings associated with personal satisfaction are also present as they realize that the many challenges contained in the project have been accepted, met and mastered. They also develop a new

respect, understanding, and comprehension of the effort that is exercised in performing a research project.

Another reason the counselor chooses a research project is that of personal, professional development along with personal growth. Wrenn (1962, p. 179) states that "the school counselor has a great need, and often a personally felt need, to continue to grow professionally and personally." Tolbert (1982, p. 313) also recognizes "that updating and/or new competencies are needed." Not only does the counselor gain in knowledge of the subject content area of the research, but they also gain in obtaining experience in the practical application of research methodology, data analysis and writing skills.

The developer of the research project also gains in knowledge and practice in the specific areas of information retrieval systems, such as actually performing an ERIC search of several data banks during the literary review phase of the project. Another specific area of professional gain involved in the research is the use of computers in analyzing and storing the data collected during the life of the project.

The counselor also becomes aware of the methodology used in the preparation of a proposal as it is utilized in writing such a proposal to a group, or board, as a request for funding to do the research. Once funding has been obtained, the counselor becomes familiar with the preparation of written reports which verify the expenditure of the funds. Not only does the counselor gain in expertise in preparation of the proposal and application process, but also in the preparation of the final report. Whether or not the counselor actually prepares the final copy of the written narrative report, an increase in the knowledge of the format of such a report is also gained.

In addition to these side effect specific areas, the counselor also increases the body of knowledge known in the content area of the research project. Some initial knowledge of the subject is essential to the original selection of the project. As the research progresses, more reading and study are necessary to assist the counselor in interpretation and application of the data collected during the course of the study. This in-depth analysis of the work previously done in the area of research thus increases the counselor's expertise in that area as well. The counselor has achieved new levels of awareness both personally and professionally.

Yet another reason for counselors to become involved in carrying out a research project takes into consideration the institution for which the counselor is employed. Having a successful researcher(s) on the staff of the institution, regardless of the type of institution, enhances the image and adds to the status and stature of that order. In terms of public education and schools in Michigan, this enhancement has an inverted umbrella effect. It can spread to several levels initiating with the counselor: to the local school, to the local school district, to the intermediate school district and along to the Michigan Department of Education.

Much has been said recently in regard to the criticism of our public schools, particularly with the "Nation At Risk" and the Michigan commission studying our state's schools. Counselors/researchers are in a position to create a positive image depicting the higher degree of professional growth and development of the staff members by participating in research projects. This positive image of the staff may be beneficial not only in countering the critics, but in assisting the school board in passing requests for badly needed millage.

Not only is the public image of the school enhanced, but the work of the counselor/researcher has further implications for school action. Wrenn (1962, p. 154) states "most important, perhaps, is the impact of such information (about student population) upon curriculum." Wrenn (1962, p. 155) also says that "the implications of student population research data seems clear for school action such as career planning." Furthermore, the American Personnel and Guidance Association (Section A: 1.) states that "the member also strives to assist the agency, organization, or institution." Not only does the counselor/researcher gain themself, but the institution serving as employer also reaps benefits. It is assumed that by conducting the research, the counselor/researcher increases their knowledge base and thereby contributes to the effectiveness of the institution's delivery of services.

The community housing the institution can also gain in status and prestige as the counselor/researcher becomes more widely known for the work done during the research project or for honors, commendations and other forms of recognition received as a result of the study. Being named as "Teacher of the Year" or "Outstanding Career Educator" are examples of such awards. They usually involve newspaper coverage and may include personal interviews--all presenting not only the individual, but the school and community in a positive manner. Depending on the scope of the project, the effect of pride could spread beyond the community level to the state or national level.

Professionally, the counselor/researcher also adds to the broad body of knowledge held by the field of counselors. Tolbert (1982, p. 314) states that "continuing professional development is a multidimensional process involving participation in meetings, research, writing, actions to enhance that status and support base of the profession." He further states that "each individual gains from the profession and each also has obligations to it" (Tolbert, 1982,

p. 314). Wrenn (1962, p. 146) describes one of these obligations.

> "...studying information about the changing character of the student population and securing understanding of the changing conditions of the community and their impact upon student population. Lacking a research director, the counselor must assume responsibility for seeing the information is secured. Many service studies need to be made. Descriptive data about students are the first step."

Using the results of the research project, the counselor/researcher could become a "master teacher" in educating fellow counselors on the findings of the study.

In addition, having successful counselor(s)/researcher(s) as members of professional counselor associations serves to enhance the positive image of credibility of those groups.

Counselors/researchers have several avenues to explore in attempting to initiate a research project. One method is to respond to requests by a sponsoring agency for research proposals. The Michigan Association for Career Education (MACE) is one such agency which sponsors, with funding, such research activities. The proposal would include, among other things, the need for the intended work and contain a summary of the research design.

Another method may be to work with the school's curriculum council or group responsible for curriculum development in initiating the research effort. A third may be to approach the local board of education requesting permission to do the project and for funding. A possibility of support for the study may also be found in the Parent Teacher Student Organization (PTSO), or similar group.

Once the proposal has been accepted, the actual study may begin. The administration of the local school in which the research is being conducted should be kept informed of the progress, assuming that permission was granted to perform the work. Further considerations are: parent permission,

cooperation of fellow staff members, printing of the actual instrument used in the study, computer time and library facilities.

After the data has been collected and analyzed, and the literature searched and reviewed, the writing of the final report takes place. The use of a word processor would be beneficial at this point.

The purpose of this paper is to present a proposal and final report of a research project that was funded by the Michigan Association for Career Education. The proposal and final report may serve as a stimulus and/or model for other professionals in the field to enrich their careers.

CHAPTER II

THE PROPOSAL

Michigan Association for Career Education

Financial Grants for Career Education Research

A. IDENTIFYING INFORMATION

1. Applying District: Charlevoix-Emmet Intermediate School District

2. Signature, Address and Phone of Administrator for the Fiscal Agent:

(signature on original proposal)

James S. Shepard, Superintendent
Charlevoix-Emmet Intermediate School District Service Center
Mercer Boulevard
Charlevoix, MI 49720
(616) 547-9947

3. Signature, Address and Phone of Contact Person:

(signature on original proposal)

Linda L. Deneen
Littlefield School
P.O. Box 1300
Alanson, MI 49706
(616) 548-5466
or
(616) 548-2261

(home information)
589 Center Street
Harbor Springs, MI 49740

4. Dollar Amount Requested: $1,500

B. STATEMENT OF THE PROBLEM

The problem to be investigated in this project is the career aspirations of male students with high academic ability compared to the career aspirations of female students with high academic ability, in terms of traditional/nontraditional career goals for males and females, and to determine if those

aspirations change after students participate in an enrichment program.

The situation is a multi-faceted one involving the potential counseling of students with high academic ability in the area or career choices. It also involves the possibility of formulating a career development program to meet their needs.

A survey was done in September and October of 1981 in Northern Michigan, in Cheboygan, Otsego, and Presque Isle Counties, from which came Rose Todd's Educational Specialist thesis. Her thesis is entitled, Career and Educational Aspirations of Economically Disadvantaged Northern Michigan High School Students with High Academic Ability, and showed that 70.2 percent of high school students with high academic ability who participated in the survey did indeed state that they were going to seek some form of training beyond high school. A further search of the literature showed that people living in rural areas may not enact those aspirations. Charlevoix-Emmet Intermediate School District is considered to be lying in a rural area in that the two counties combined had an estimated "1980 population of about 45,900 with 73 percent of all families earning below $20,000" (Data Research Center, Inc., 1980). Unfortunately, Rose Todd's survey did not differentiate between males and females and did not specify what the students' actual career choices were.

During the current school year, 1982-1983, the schools in the Charlevoix-Emmet Intermediate School District were involved in Project ASETS (Achieving Sex Equity Through Students) and the Materials Usage Workshop, two components of Project NETWORK through the Michigan Department of Education. These projects emphasize the exploration of nontraditional career goals for males and females and focuses on secondary students and teachers.

In addition, two neighboring intermediate school districts, Cheboygan-Otsego-Presque Isle Intermediate School District and Charlevoix-Emmet Intermediate School District, are collaborating with North Central Michigan College, in Petoskey, to sponsor a "College for Kids" program. This program, for the communities' students with high academic ability in grades four through eight, will provide a variety of enrichment sessions and will take place during June of 1983. "The college community has much to offer in the areas of enrichment and in providing role models for future development of these young people. 'College for Kids' exposes youngsters to a variety of role models, especially persons in successful, productive careers. Instructors and visitors to classes will provide such opportunities. Students are encouraged to acquire an understanding of various career roles, their requirements and rewards, benefits and limitations" (Philosophy--College for Kids, 1983).

This project is of particular interest to the two intermediate school districts and the college community because of the collaborative effort in the "College for Kids" program, a community-initiated project. The results will be of impact to the Charlevoix-Emmet Intermediate School District because of that district's involvement in the sex equity projects. Furthermore, the Bridge Area Counselors Association, an organization open to people who do professional counseling in schools or agencies in Northern Lower Michigan and Southeastern Upper Michigan, has professional interest in this project. The results may have implications for counseling students with high academic ability in that these students are made aware of their abilities and of the career choices open to them. These people may be in a position to formulate a career development program to meet the needs of this specific population.

As a final point of particular interest, this author, pending approval from the Department of Counselor Education and Personal Development at Central Michigan University, intends to use this project as a "Plan B Project" in partial fulfillment of the requirements for the Master's degree.

This problem was identified partly through the results of Rose Todd's survey in that male and female career choices were not compared, nor were the career choices specified. Further, Todd's work was done with high school students; this project will involve students currently in grades four through eight. Additionally, the intermediate school district has recently undertaken the sex equity project, but has not applied the concept to a special population (i.e., students with high academic ability in grades four through eight).

Faith Dunne, in her article, "Occupational Sex-Stereotyping Among Rural Young Men and Women" (1980), found that in the general high school student population, rural young people perceive some jobs to be unsuitable for women and some jobs unsuitable for men.

Dunne, Elliott and Carlsen, in their article, "Sex Differences in the Educational and Occupational Aspirations of Rural Youth" (1981), showed that young women in rural areas in the general high school student population tend to aspire to female-stereotyped jobs.

Cook, in her article, "Sex Differences in the Career Choices of College Students" (1981), discovered that college students' perception of sex-appropriateness of careers may limit some of the most personally meaningful options for them.

Almquist found in 1973 in her article, "Occupational Sex Stereotypes," that studies of career plans for young women have concentrated for a long

time on the division between career and homemaking orientation.

A brief review of the literature shows that studies have been conducted in the area of comparative career aspirations of rural youngsters. Those studies show that sex-stereotyping does indeed exist. Little, however, has been done to research aspirations of youth with high academic ability in grades four through eight.

Concerning the funding categories, this project relates to three of the five funding categories and has a possible implication for development in a fourth.

Community based initiative: uses the "College for Kids" program

Collaborative Project: the neighboring school districts and the community college in the same program

District-wide Program: involves students in both neighboring intermediate school districts

Career education program for a special population: the results may lead to such development

C. WORK PLANS

A pre/posttest will be conducted with students in attendance at the "College for Kids" program during June of 1983. The testing will be conducted as part of the students' initial orientation to the program and as part of their final evaluation of it. The instrument will be a simple confidential survey.

A pilot testing of the survey will be conducted at a selected school prior to the actual test dates.

Data analysis will be conducted via item analysis and tabulation of responses, hopefully with computer analysis.

D. TIME LINE

April, 1983 . . . . . construct instrument

May, 1983 . . . . . pilot testing of instrument

June, 1983 . . . . . administer instrument

July, August, 1983 . . compile data, data analysis and literature review

September, 1983 . . . prepare Final Report

October, 1983 . . . . submit Final Report

E. BUDGET

The budget is to include funding for instrument construction, pilot testing of the instrument, administration of the instrument, compilation of the data, data analysis, literature review and preparation of the Final Report.

Supplies and materials	$ 500.00	
Printing, typing and word processing	300.00	
Scoring and data analysis	300.00	
Auditors' fees for fiscal agent	120.00	(as required by the Michigan Department of Education @ 8% of $1,500)
Postage and phone calls	280.00	
TOTAL	$1,500.00	

Fiscal Agent:

Charlevoix-Emmet Intermediate School District
Mercer Boulevard
Charlevoix, Michigan 49720

F. RELATIONSHIP TO CAREER EDUCATION/CAREER DEVELOPMENT

This project corresponds to the career education model in the career development areas of self-awareness and assessment as the students survey

their own choices of career roles. It also parallels the career awareness and exploration component as they participate in the "College for Kids" program. The study supports the career decision-making component of the "model" in that the results will be presented to the Bridge Area Counselors' Association and the Counselor Education and Personal Development contact persons in the intermediate school districts. It eventually will become an integral part of the career preparation and the career planning and placement component of that aspect when these students return to their own school settings and begin scheduling their course work as they progress in academic, vocational and technical endeavors.

The results of this project will contribute to the research base of career education and be beneficial to career education in the state by providing a comparision. The comparison will be of the career aspirations of males with high academic ability to females with high academic ability in terms of traditional/nontraditional career roles for both sexes. In addition, these aspirations will be surveyed again after participation in an enrichment program to see if the choices of the students changed.

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CHAPTER III

THE FINAL REPORT

A. IDENTIFYING INFORMATION

1. School, Agency, Individual

Charlevoix-Emmet Intermediate School District

James S. Shepard, Superintendent
Charlevoix-Emmet Intermediate School District Service Center
Mercer Boulevard
Charlevoix, MI 49720

(616) 547-9947

2. Person Involved in Research Activity, Titles and Contact Person

Linda L. Deneen
Consultant for Gifted Education

Mason-Lake Intermediate School District
2130 W. U.S. 10
Ludington, MI 49431

(616) 757-3716

Formerly, Counselor
Littlefield School
P.O. Box 1300
Alanson, MI 49706

(616) 548-2261

B. TARGET POPULATION

1. Number of Participants, Ages, Grades

The population involved in this study was 210 participants who ranged in age from nine years of age to fourteen years of age. They ranged in

grade level from the fourth through the eighth grade during the school year 1982 to 1983.

2. How Selected

They were selected on the basis of their participation in the "College for Kids" program at North Central Michigan College. This was a unique environment created immediately following the close of the regular school year. This enrichment program was one in which students and instructors sought to make summer a productive experience. Aspects of career education were expected to be injected by the instructors into their teaching sessions.

Students who exhibited task commitment, motivation, self-direction, creativity and high performance were encouraged to participate. Registration forms were sent to each local school district in Charlevoix-Emmet Intermediate School District and Cheboygan-Otsego-Presque Isle Intermediate School District for distribution. The local school districts chose their own actual selection process. A suggested method was to use a 90 percent score on a standardized testing instrument for either reading or math. There was a tuition fee. Courses were filled on a return mailing, first-come-first-served basis and enrollment in each class was limited in number.

C. METHODOLOGY

1. The Statement of the Problem

The problem to be investigated in this program is the career aspirations of male students with high academic ability compared to the career aspirations of female students with high academic ability, in terms of traditional/nontraditional career goals for males and females and to determine if those aspirations change after students participate in an enrichment program.

2. The Subproblems

The first subproblem is to investigate the career aspirations of male and female students with high academic ability by using a career survey. The survey will be administered during the "College for Kids" program.

The second subproblem is to determine which of those career aspirations are traditional and which are nontraditional.

The third subproblem is to analyze the data collected to evaluate the differences between career choices of males and the career choices for females.

The fourth subproblem is to determine the differences in career aspirations resulting from participation in an enrichment program.

3. The Hypotheses

The first hypothesis is that youngsters with high academic ability will have multi-directional career choices.

The second hypothesis is that males and females with high academic ability expect to enter traditional career areas for their sex.

The third hypothesis is that participation in a two-week enrichment program will produce differences in career aspirations.

4. Delimitations

The study will not concern itself with the identification of gifted and talented students as there are few established programs in Northern Michigan for this specific population. In addition, although the underlying concepts are similar, actual identification procedures vary widely between school districts where established programs do exist.

This study is delineated by the fact that something other than "College for Kids" may have brought about a difference, or lack of, in career

aspiration. In addition, the degree to which each "College for Kids" instructor injected career education aspects into their session will not be a consideration.

This project will not be concerned with a comparison of the career aspirations of this sample with those of another group.

The project will examine changes in traditional/nontraditional career goals as well as be concerned with those actual career goals of the sample.

5. Definition of Terms

Several terms need further clarification. The phrase "students with high academic ability" is defined on the basis of their participation in the "College for Kids" program. "Traditional/nontraditional" is meant to be "Men or women who have roles or occupations that historically have been held by members of their own sex are traditional. Men or women taking on roles traditional for the other sex are considered to be nontraditional" (Wayne County Intermediate School District, 1982, p. 9). "Career aspirations" will be used to describe selections made on Question Six of the "Career Survey." "Enrichment program" is interpreted to be the "College for Kids" experience.

6. Assumptions

The first assumption is that the students selected in the sample have had some exposure to career development previous to "College for Kids."

The second assumption is that these youngsters are interested in considering career aspirations.

The third assumption is that instructors during the "College for Kids" program inject aspects of career education into their sessions.

7. The Importance of the Study

The purpose, need for, and background of this program have been explained in the initial proposal. However, in essence, this project is to look at the career goals of youngsters with high academic ability, to determine if those goals are traditional or nontraditional for their sex and to determine if those aspirations change after participation in an enrichment program. Area counselors need to know so that this population may receive the proper career guidance. The community college wishes to know their hopes so it may better serve the needs and desires of the future students. The intermediate school district wishes to sample the views of younger children on traditional and nontraditional occupational views due to their participation in the state-wide sex equity project. On a wider scale, persons involved with career education in the state need to know the awareness level of this group of students so they may realize their full potential having received the best education in the world of careers as is possible.

8. Research Design

Following a pilot testing, a confidential survey will be conducted with students in attendance at the "College for Kids" program. It will be given as a "(Minimal Control): Pretest-Posttest" (Isacc and Michael, 1982, p. 64) as a part of the students' initial orientation to the program and as part of their final evaluation of it.

9. Data Collection and Analyses

Only the demographic data and responses to the first six questions were used in this study. Data collected for those questions was accomplished via a data coding system developed for use with the Apple II-E microcomputer.

Data analysis included determining the number of pairs of both pre and posttest scores. From the population, 156 pairs were identified to be used in the sample. Mean and median ages for females and males were determined as well as for the total sample. The mean and median grade level in school was also computed for the same total group and sub-groups.

A frequency table of the number of "yes" and "no" responses by the total group and sub-groups for the first five questions on the survey was accomplished on a pretest-posttest basis. The questions are listed in Figure 1; for the completed survey, refer to the Appendix.

Question Six involved the students' actual choices. For ease of reference, responses to that question were categorized into thirty more general areas. The thirty categories were then determined to be historically oriented either predominantly male, female or either sex. A frequency table of each categorical choice against the total sample was assembled on the pre and posttest. No regard was given to the order the students placed their choices nor to the number of choices, up to five.

Following the frequency table, the number of traditional, nontraditional and either sex choices were tabulated for females and males for the pre and posttest.

Then the number of changes from one category to another for each subgroup and total group were tallied and used to determine significant change. Significance was determined by the use of the "Wilcoxon Matched-Pairs Signed-Ranks Test" (Introstat 2.2, 1982, p. 24).

D. SUPPORT NETWORKS

1. Departments, Units and Groups Involved

Involved in this project were not only the investigator and the sample

of the population of the study, but numerous others. Staff at the cooperating intermediate school districts assisted in establishing the "College for Kids" program and in administering the "Career Survey." Community members were involved with the program as instructors.

A data coder was utilized as well as a collegiate staff person to assist with the data analysis. In addition, librarian services were required as an ERIC Search was undertaken to review the literature.

The staff and administration at North Central Michigan College was also supportive. "College for Kids" was viewed as an excellent way to get those students on campus as potential students.

E. RESOURCES

1. Resources Utilized in the Project

The Bridge Area Counselors' Association will be involved as this project is presented to that group in an attempt to initiate career guidance for the students with high academic ability. A further resource will be to call upon Project ASETS through Wayne County Intermediate School District to enhance the concept of nontraditional careers. This project was initiated in Charlevoix-Emmet Intermediate School District during the 1982-1983 school year. The premises of sex equity presented throughout the project year formed one of the key foundations of the study.

F. TIMELINE

1. Time Span of Project Activities

The initial survey used in the study was developed, pilot tested and printed in final form prior to the June "College for Kids" program during

the spring of the school year 1982-1983. Summer months were spent analyzing the data collected, preparing the literary review and writing of the study.

2. Critical Timing Situations

No particular critical timing situations occurred. One possible area of crisis occurred in printing of the "College for Kids" registration forms. A request for parental permission to participate in the survey was necessary to be inserted in the form.

G. FINDINGS

1. Statistical Description of Sample

Mean age of females was determined to be 11.2 years, while the median age was 11 years. For males, the mean age was 11.2 years and the median age was 11 years. For the total sample, the mean age was 11.2 years and the median age was 11 years.

Considering grade level, the mean grade level of females was 5.4 and the median 5. For males, the mean grade level was 5.3 and the median 5. For the total group, 5.39 represented the mean grade level, while 4 represented the median grade level.

For both age and grade level for the total group, the standard deviation of 1.2 remained the same as well as the standard error of measurement, 0.1.

In comparing grade to sex and age to sex, there was not a significant number, according to the Chi-square statistic, of males nor females in any grade or age grouping to indicate that the groups of males and females were any different.

2. Statistical Analysis of "Career Survey"

For ease of reference, the questions used for statistical analysis are shown in Figure 1. Questions One through Five were handled in a separate fashion from Question Six, which concerns the students' statement of aspirations.

The tabulation of responses for Question One through Question Five is shown in Table 1. Testing for significance utilizing the Wilcoxon Matched-Pairs Signed-Ranks Test showed no significant differences between pre and posttest scores for males and females or for the total sample, except on Question Four for the total group.

The entire sample plans to graduate from high school.

The large majority of students plan to attend college.

Concerning graduation from college, most students plan to graduate from college. The majority of them also indicated the desire to extend their collegiate experience beyond the undergraduate level. As a group, however, students felt that on the posttest, they would choose to stop there.

Conversely, most students did not opt for special training beyond high school instead of college.

Question Six responses required differential treatment. The frequency of each categorical choice is given in Table 2 for pre and posttesting for the total group. No regard was given to the order students placed their choices nor to the number of selections, up to five.

No significant changes were found from pre to posttesting in categorical selection. The most selected categories for the group were: (1) Fine and Performing Arts, (2) Doctors, (3) Teachers, (4) Science, and (5) Computers.

1. I plan to graduate from high school. YES _____ NO _____
2. I plan to go to college after I graduate from high school. YES _____ NO _____
3. I plan to graduate from college. YES _____ NO _____
4. I plan to continue my education after I graduate from college (for example: to become a medical doctor, college professor, counselor, school principal, dentist, etc.). YES _____ NO _____
5. I plan to go to a special school or the armed services instead of college for training. YES _____ NO _____

   If you answer YES, what type of training do you plan to receive?

6. I am considering the following careers (occupations, job). You may list as many as five.

   (1)

   (2)

   (3)

   (4)

   (5)

Figure 1. Questions One Through Six From "Colleges for Kids Career Survey"

Table 1. Responses for Question One to Question Five

	Females				Males				Total Group			
	Pretest		Posttest		Pretest		Posttest		Pretest		Posttest	
	YES	NO	YES	NO	YES	NO	YES	NO	YES	NO	YES	NO
Question 1	89	0	89	0	67	0	67	0	156	0	156	0
Question 2	87	2	87	2	66	1	66	1	153	3	153	3
Question 3	87	2	85	4	62	5	60	7	149	7	145	11
Question 4	70	19	65	24	45	22	40	27	115	41	105	51
Question 5	1	88	1	88	5	62	8	59	6	150	9	147

Table 2. Free Choices of Occupations

Occupation	Pretest Results	Posttest Results
Fine and Performing Arts	67	71
Sports	19	20
Secretarial	14	17
Engineering	10	6
Computers	28	27
Doctors	66	62
Nursing	17	11
Medical Support Staff	2	2
Dentistry	10	10
Lawyer	27	27
Teacher	45	32
Educational Administration	1	0
Educational Support Staff	1	1
Space	7	8
Animals	1	2
Armed Services	2	4
Science	37	29
Biology	5	5
Politics	4	4
Farming	1	1
Services (Helping)	5	5
Banking	2	2
Business	1	3
Service (Doing)	18	13
History	2	4
Sales	1	2
Language	0	1
Pilot	9	14
Design	5	4
Mother/Father	1	1

Table 3. Traditional, Nontraditional and Either Sex Career Aspirational Selections

Selections Type	Pretest Results	Posttest Results
Female Selections Traditional	82	96
Female Selections Nontraditional	130	136
Female Selections Either	58	59
Male Selections Traditional	154	145
Male Selections Nontraditional	9	8
Male Selections Either	23	31

Table 3 reflects the students' selections of careers by sex, in terms of traditional, nontraditional and either sex occupations. While no statistical significance is noted for changes between pre and posttests, girls' selections were greater in frequency in nontraditional areas. Boys' selections were greater in frequency in their traditional areas.

3. Summary

As shown by the categorical spread of students' career aspirations, the first hypothesis that youngsters with high academic ability will have multi-directional career choices is accepted.

The second hypothesis is rejected as this study shows that females expect to enter nontraditional career areas for their sex. The hypothesis stated that both males and females expect to enter traditional career areas.

The third hypothesis is also rejected. It stated that participation in a two week enrichment program would produce differences in career aspirations. This study showed no significant change occurring in either free choice in terms of traditional/nontraditional career roles.

H. RECOMMENDATIONS

1. Replication

If the project were to be replicated elsewhere in similar situations, it would be of interest to compare the results from differing sections of the state and/or nation. Of particular interest would be to determine if the career aspirations on the pre or posttest of one group were alike or different from those of a group from another area. This concept could be applied to sub-groups also involving only males or only females, or ages or grade level in school.

It would be difficult to control the enrichment program variable, however, from one program to another. The study, in that regard, would need to be adapted to look at only the samples' career aspirations on a comparison basis.

If the project could be replicated in enough areas, with a variety of enrichment programs operating, then a further study could be conducted to determine a cause/effect relationship between participation in an enrichment program and change (or lack of) of career aspirations on a wider basis.

A possible adaptation of this study would be to administer a third and fourth posttest after several months had intervened to determine the effect of latency upon their choice on the initial test utilizing a timed series of measures.

2. Major Considerations for Replication

Major considerations necessary for replication include administration of the same survey, permission of the parents of the sample group, and an enrichment program. One other aspect is of merit: computer analysis of

the data. This can prove to be costly, but is indeed cost efficient when a large sample is drawn and time is valuable.

3. Recommendations for Further Study

A recommendation for further study would be to utilize a control group in the research design. Also, if a specific career education component were built into the enrichment program, the outcome(s) would be of interest.

Another recommendation involves the determination of the extent of career developmental exposure the youngsters exhibit and grouping them likewise into homogenous groups to measure the amount of differences that participation in the enrichment program did have.

Of further interest would be to compare the first five responses to the questions on the survey with how males and females responded to Question Six.

Of course, the data collected from the entire survey could be used for further, more extensive study.

Another possibility would be to conduct a longitudinal study of the students involved in this "College for Kids" sample group to examine the enactment of their aspirations and/or changes in their career plans between the time of the initial survey and the time of the new study.

I. RELEVANCE TO CAREER EDUCATION

1. Particular Location and Statewide

The findings in this study will enable area counselors and others involved in the career education of students with high academic ability in Northern Michigan schools and on a statewide basis as well to better meet the needs of those students by:

a. Knowing what career aspirations this group tends to hold.

b. Serving as a threshold on which to base further career education programming for students with high academic ability.

c. Acting as a target for the community college to base future courses when this population enters the collegiate era of their scholastic endeavors.

d. Showing that traditional/nontraditional career choices begin at an early age.

e. Showing that girls tend to select nontraditional career areas for their sex, while boys tend to choose traditional ones.

2. Career Education Movement

These findings may help the career education movement by:

a. Supporting the effectiveness of the awareness aspect of career education in that the students were aware of many career options as indicated by their multi-directional career choices.

b. Supporting the concept that gifted and talented persons have unique career education needs.

c. Providing a broader base of data in the area of traditional/non-traditional career choices.

d. Providing insight into the concept that decision-making skills must suit the needs of the individual in that some persons need further refinement of that process--perhaps in creative problem solving.

e. Developing a model program for career education for gifted and talented students (i.e., combine career education and gifted/talented programming).

f. Providing an examination of the specific career developmental needs of the gifted and talented leading to a reevaluation of program goals and strategies in light of these needs.

g. Developing leadership training to promote attitudes and skills needed to function in adult career roles.

h. Showing that this group of gifted females tend to select non-traditional career areas, while boys selected traditional ones for their sexes.

J. OTHER COMMENTS AND INFORMATION

A more extensive review of the literature found more specific themes regarding this study. They can be divided into two general areas: career education for gifted and talented students and sex role stereotyping in occupations as it exists for gifted and talented students. These areas are underscored by this study showing what are the actual career aspirations of gifted and talented children in that they are concerned with the derivation of those goals--whatever they may be. While many studies of career aspirations of gifted and talented students were found, none were located concerned with the age of this study's sample in terms of traditional/nontraditional roles.

The terminology of "gifted and talented" will be used in place of "students with high academic ability" since the former usage is more widely accepted. "Gifted and talented," however specifically defined for a local population, has no state or federal definition. It is generally accepted as meaning those persons who, because they have outstanding abilities, are capable of high performance (Todd, 1980).

1. Career Education

Regardless of what their current career aspirations may be, those decisions are enhanced in Michigan schools by the career education programming done there. However, the gifted and talented student comes to the career education experience with unique needs as a person. On the other hand, the gifted and talented student has all the needs of any other student in terms of career development and career preparation. This student needs, the same as any other, self-awareness and exploration, career decision-making skills, and career planning and placement. The gifted and talented youngster also needs the same preparation for academic, vocational and/or technical education (Michigan Department of Education, undated). All of these components should be imparted to all Michigan students to enable them to make appropriate decisions about a career after school has been completed.

In addition to those general aspects, many authors (Hoyt and Hebler, 1974; Clark, 1979; Newland, 1976; Kerr, undated; Fox, 1976; Jepsen, Fredrickson, Herr and Watanabee, in Colangelo and Zaffrann, 1979) point out that the gifted and talented student has more extensive requirements. Colson (1980) states in her study of a community-based career education program for gifted and talented students, that "the most critical information that a gifted and talented student should receive prior to high school graduation is information about career fields" (p. 105).

A concept known as multipotentiality complicates a gifted and talented student's choice of career (Hoyt and Hebler, 1974). Being good at a lot of different things does not always mean a gifted and talented child can make a logical decision (Delisle, 1983). The gifted child is good at many things and is capable of performing many tasks in an acceptable fashion.

The decision to be made is not so much what the child excells in, but which. This decision has many ramifications both on a personal and on a societal level (Hoyt and Hebler, 1974). It also functions at an emotional level. The "you can be anything" attitude results in the aspect of being bound to let someone down (Delisle, 1983). Further, when the child does choose, the feeling of eliminating all the others may be present.

The "expectations of parents, teachers, friends and society in general operate to restrict their range of career choices and to pressure them into high goals" (Hoyt and Hebler, 1974, p. 104).

Clark (1979) also agrees that possessing multiple talents and interests can complicate career choices. She also agrees that high expectations operate as pressures. Knowing that they are good at many things, exhibiting multipotentiality, and knowing they will choose sooner or later, with or without all the external pressure to achieve at a high level, clouds the issue of career choice for the gifted and talented child by not providing limitations, or boundaries for them to work from. The pressure arises when others expect that child to enter a career with so-called high goals.

Clark (1979) brought out another issue in the career education of gifted and talented students--that of making a commitment to a long-range goal. Jobs which gifted children are capable of often require long, extensive, expensive training. This necessitates the gifted person to put aside or postpone personal, immediate happiness and enjoyment.

The gifted person may choose a career path that leads to fulfillment rather than achievement" (Sanborn, in Colangelo and Zaffrann, 1979, p. 287).

Another special need of the gifted and talented child is created by the "exceptional nature of giftedness. The gifted have few peers with

similar talents and perhaps even fewer with such challenging aspirations. They are without appropriate norm comparisons and have few readily accessible models" (Jepsen, in Colangelo and Zaffrann, 1979, p. 280). The role models so common to the majority of students are limited.

In summary, while gifted and talented students have all the career education needs of any other student, they have additional ones which need to be attended to to enable them to make critical decisions so that they may reach their full potential. Since this study is concerned with the career aspirations of such youngsters, the implications of knowing those hopes are widespread in a social and economical perspective. It is also beneficial to the field of career education for gifted and talented in view of the unique needs of those children that have been addressed.

2. Sex Role Stereotyping

When the career choices of gifted children are examined after being divided into two groups by sex, a central theme emerges. Gifted girls seem to have unique difficulty in selecting a career (Fox, 1979; Gowan and Groth, in Colangelo and Zaffrann, 1979). "Gifted girls represent one of the greatest wastes of human resources" (Kerr, undated, p. 4).

Initially, they must decide whether to seek a career outside the homemaker role. Secondly, if they do decide to pursue a career, they must then decide between a traditional or nontraditional occupation.

Wilson (1982, no page numbers used) states that "we can expect that the economic situation in the 1980's will encourage females to enter the higher-paying, traditionally male-dominated fields." Historically, female-oriented jobs have less status and monetary rewards; this may act as incentive for gifted girls to plan to enter male-dominated fields. Wilson (1982) further contributes that "there is no difference between the

number of males and females planning to enter male-dominated fields" in actual job choice, yet in ideal job selection, gifted girls tend to enter those areas less traditionally male-dominated.

Further literature has shown that gifted girls may want to enter a more typical, less male-dominated field, but perhaps economic and achievement of personal status and satisfaction allows them to more comfortably enter a nontraditional career area. Schwartz (1980), in her study of gifted females, states that "although gifted females have more doors open to them than they did a generation ago, they also face the continuing barriers of sex role stereotyping, repeated fear of success and long induced lack of self confidence. The gifted girl cannot be pushed where she is unwilling to go" (p. 116).

Gifted girls need specific role models (Progrebin, in Colangelo and Zaffrann, 1979) as they even consider a career outside home and family. Gifted girls may fear rejection by their peers. They may also feel that their achievements, abilities and successes are perceived as unfeminine or aggressive and need to see other women in the field who represent their section of society. This study showed that young girls, however, more frequently select nontraditional careers.

In examining gifted boys entering nontraditional career areas, little evidence was located. One study by Wilson (1982) showed that gifted boys tend to select traditional career areas more than gifted girls choose them for their sex. This study supports Wilson's findings.

Much, however, can be found in the area of sex role stereotyping. Sex role occupational stereotyping continues to be quite traditional, according to many authors (Guttentag and Bray, 1976).

In view of this research, the concept of androgeny has emerged (Higham and Navarre, 1983; Guttentag and Bray, 1976). This concept is one in which the adult in our society has characteristics of both traditional views of masculinity and femininity. The androgenous individual, then, according to researchers who study sex roles, does not tend to limit his development of career potential because he does not have set views of what is a male job and what is a female job.

In looking at males and females as one group of gifted persons, research has shown that this group may not be as influenced by sex role stereotyping as others. Tysse (1982), in her paper on sex roles affecting career development, states that "because of their advanced congition level, they may have nontraditional sex role attitudes and be influenced less by sex role in their life style."

One final dimension to be considered, Konner (1982) presents an interesting global prespective for gifted girls considering leadership roles. He contends that having women in global power, leadership positions is a good thing. Good for two reasons: (1) women are more nurturing and "affiliative;" (2) women tend to have lower aggression levels than men. Given the potential of potential total annihilation on a global scale, having women in these positions of global leadership and power may, in reality, perpetuate the species.

In summary: (1) gifted females do encounter unique difficulties when faced with career selection, not only because they are gifted, but because of sex role stereotyping; (2) gifted males may not encounter such problems; (3) the gifted population is seen to have less sex role stereotyping than other groups; (4) women may be responsible for the perpetuation of the species.

Research has shown us that the career development (Mori, 1982) of gifted and talented children is progressing normally, thereby exposing them to the component of career education set forth by the Michigan Department of Education. While many career education projects have been developed for gifted and talented children throughout the country, the students should have exposure to self and career awareness to enable them to arrive at some ideas of what they may desire as a career. This study has shown a diverse spectrum of career aspirations thereby exemplifying this level of awareness. This multi-directional pattern has been found in other studies (Wilson, 1982; Sanborn, 1979; Hoyt and Hebler, 1974; and Jepsen, 1981).

The literature has shown that gifted and talented students have unique needs in the area of career aspirations so they are better able to make those appropriate career choices. It assumes gifted and talented children are capable of choosing a career and focuses on the concepts underlying those decisions. More specifically, gifted girls have special requirements in even considering a career, much less one traditionally dominated by males.

This study has examined the career aspirations of a sample of this population of students. In relating those goals of students to what literature has shown about how those goals were derived, several implications can be drawn:

a. Gifted and talented students need critical self assessment and decision-making skills.
b. The fear of failure represents an area of concern for persons responsible for career education of the gifted and talented.
c. Postponement of personal satisfaction and enjoyment for a long-term

commitment, both in terms of time and money, represent another area of concern that persons responsible for the career education of gifted and talented children should be sensitive to.

d. Gifted and talented students may have less rigid views of traditional/nontraditional sex roles.

e. Since girls tend to have unrealistic goals--either very high or very low--in this study, they need specific career counseling.

f. Career goals of gifted and talented represent a diverse selection of choices.

g. Since boys tend to more frequently select traditional career areas, they may need further exploratory career education guidance.

h. Since girls tend to more frequently select nontraditional career areas, even though many still choose traditional ones unlike the boys who selected heavily in traditional areas, they may need further specific career counseling.

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APPENDICES

APPENDIX A

"COLLEGE FOR KIDS" CAREER SURVEY

Birthdate _____

First Initial ____ Middle ____ Last ____

Boy _____ Girl _____

Grade for School Year 1982-83 _____

Age _____ Race _____

We would like to know more about your plans for the future. These plans need not be definite, but please try to give us the best picture of what you plan to do if you had to decide right now. For the questions that follow, please put a check mark on the line that applies to you or give the short answers where asked.

1. I plan to graduate from high school. YES _____ NO _____

2. I plan to go to college after I graduate from high school. YES _____ NO _____

3. I plan to graduate from college. YES _____ NO _____

4. I plan to continue my education after I graduate from college (for example: to become a medical doctor, college professor, counselor, school principal, dentist, etc.). YES _____ NO _____

5. I plan to go to a special school or the armed services instead of college for training. YES _____ NO _____

   If you answered YES, what type of training do you plan to receive?

6. I am considering the following careers (occupations, job). You may list as many as five.

   (1)

   (2)

(3)

(4)

(5)

7. In selecting my careers in #6 above, the things that influenced me were:

(You may check more than one.)

_____ cost of training
_____ amount of money to be made in that field of work
_____ length of time for training
_____ my interests
_____ my abilities
_____ my experiences
_____ other--please state _____

8. The person(s) or group of persons who influenced my selections in #6 above are: (You may check more than one.)

_____ my parents and family
_____ my friends
_____ my teacher(s) at school
_____ "College for Kids"
_____ my school counselor
_____ someone who already does that job
_____ other--please state _____

9. My family subscribes to at least one magazine. YES _____ NO _____

10. My school has a counselor. YES _____ NO _____

11. I have visited a college campus. YES _____ NO _____

12. I have attended a "career fair" or a "career day." YES _____ NO _____

13. I travel more than 50 miles from home more than once a year. YES _____ NO _____

14. I have had some class time to learn more about careers, career choices, career preparation, etc. YES _____ NO _____

15. I have participated in field trips to see people actually doing their jobs. YES _____ NO _____

16. I have had people come and talk to my class about the job that they do. YES _____ NO _____

17. I would like to know more about: (You may check more than one.)

_____ colleges and specialized schools
_____ choices for careers
_____ what people do in their careers
_____ training required for jobs
_____ what my own abilities are
_____ other--please state _____

18. Fifteen years from now I would like to be .....
(Use the back of this paper for more room to write.)

19. Fifteen years from now I probably will be .....
(Use the back of this paper for more room to write.)

APPENDIX B

Traditional/Nontraditional Sex Role Definitions and Categorical Grouping of Students' Responses to Question Six

E = Predominantly either sex--based on an historical basis
F = Predominantly female sex--based on an historical basis
M = Predominantly male sex--based on an historical basis

E - Fine and Performing Arts: ceramics, artist, comedian, illustrator, model, broadcasting, journalism, reporting, potter, actress, calligraphy, inker, cartoonist, singer, entertainer, dancer, musician, author, poet, photography

F - Secretarial

M - Engineering: chemical, medical, nuclear, electrical

M - Computers: design, program, technician, processor

M - Doctors: M.D., pediatrician, optometrist, psychiatrist, veterinarian

F - Nursing

E - Medical Support Staff: radiologist, technician, aide, therapist, geriatrics

M - Dentistry

M - Lawyer

F - Teacher

M - Educational Administration: superintendent, principal

F - Educational Support Staff

M - Space: technology, exploration, NASA, astronaut, meteorology, astronomy

M - Animals: humane society, wildlife management, naturalist, raiser

M - Armed Services

M - Science: geologist, physicist, archeologist, nuclear physicist, anthropologist, chemist

M - Biology: ranger, biologist, marine biologist, molecular biologist

M - Politics: president, senator, judge

M - Farming

F - Services (Helping): waitress, babysitter, MESC worker, beautician, stewardess, interest instructors

M - Banking

M - Business Management: owner

M - Services (Doing): custodian, trucking, cook/chef, baking, FBI, police, ship's hand, telephone repair, electrician

M - History: historical guide, historian

F - Sales: clerk

E - Language: translator, interpreter

M - Pilot: commercial, test

M - Design: architecture, auto design

E - Mother/Father

APPENDIX C

FORMAT FOR FINAL REPORT

Michigan Association for Career Education

Financial Grants for Career Education

1983

A. IDENTIFYING INFORMATION

1. School, agency, individual
2. Personnel involved in the research activity and titles
3. Contact person

B. TARGET POPULATION

1. Number of participants, ages, grades
2. How selected

C. METHODOLOGY

1. Program(s)
2. Delivery system
3. Research design
4. Data collection and analyses
5. Monitoring

D. SUPPORT NETWORKS

1. Other departments, units, or groups who were involved (i.e., community, parents, other staff)

E. RESOURCES

1. Curriculum, tests, personnel, and other resources utilized in the project

F. TIMELINE

1. Identify time span of project activities
2. Specify any particularly critical timing situations you encountered

G. FINDINGS

1. Summarize the significant results and findings of the research
2. Include a summary and analysis of the research data
3. Include tables, charts, graphs, etc. to support your findings

H. RECOMMENDATIONS

1. Would you recommend that your program be replicated in similar situations?
2. Include specific recommendations for adoption/adaption.
3. What are the major considerations necessary for replication (i.e., cost, time, political concerns)?

I. RELEVANCE TO CAREER EDUCATION

1. What relevance do your findings have for career education in your particular location and statewide?
2. How may your findings help the career education movement?

J. OTHER COMMENTS/INFORMATION